



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,538	09/27/2001	Takayo Katsuki	36856.550	8080

7590 08/23/2004

Keating & Bennett LLP
Suite 312
10400 Eaton Place
Fairfax, VA 22030

EXAMINER

EASTHOM, KARL D

ART UNIT	PAPER NUMBER
----------	--------------

2832

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,538

Applicant(s)

KATSUKI ET AL.8

Examiner

Karl D Easthom

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2832

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 3-10, and 21-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, the term “the surface” is vague, since there is more than one surface introduced. In claims 1 and 21, the terms “about 90 degrees”, “substantially perpendicular”, and “near the center” are relative terms which render the claims indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. See Exxon Research and Engineering Co. V. United States (USFedCir) 60 USPQ2d 1272 (9/2001)(citing with approval, and distinguishing In re Jolly 172 F.2d 566, 80 USPQ 504 (CCPA 1949)(holding that “a time sufficient to produce a substantially homogeneous product but insufficient to ...” was vague and indefinite where the term was critical to patentability). Exxon stated at page 10 of the USPQ web based opinion that “Jolly was a case in which the court was reviewing the rejection of a patent application, not an infringement action based on an issued patent. Patent applicants have the opportunity to amend their claims during prosecution in order to overcome an indefiniteness rejection is vague as a term of degree absent guidelines. The terms “about” 90 degrees and in the vicinity of the center are vague where applicant argues that the phrases define over the prior art.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2832

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-4, and 7-8 are rejected under 35 U.S.C. 102(b) as anticipated by Duggan et al. Duggan discloses the claimed invention at the sole fig. with thermistor 2, electrodes 2, lower and upper terminals 3, junction portion at 4, vertical-leg portion at 5, and lower-end portion at the end of 3 or the other diagonal portion. The vertical-leg is about 90 degrees, and the lower-end portion is substantially parallel where the terms are of degree. For claim 3, the junction portions overlap. For claim 4, the round shape is seen. For claim 7, the horizontal connection portion could be when the device is side mounted, or mounted on any surface, where horizontal lacks a point of reference and surface is claimed. In claim 8, the connection portion is only near the central portion.

6. Claims 1, 3-4, 7-10, and 21-26 are rejected under 35 U.S.C. 102(b) as anticipated by Camp or, in the alternative, under 35 U.S.C. 103(a) as obvious over Camp in view of Ikeda, Duggan et al., or Frielinghaus. Camp discloses the claimed invention at Figs. 2 and 4 with junction portion touching the lower electrode (the conductive coating, col. 2 lines 18-25), short

Art Unit: 2832

vertical leg portion where 14 points, and parallel portion 15. As seen at Fig. 5 the short vertical portion is spaced inwardly (in part) of the periphery of the thermistor 10, since its outer edge appears even, so that the part that is inward is considered the vertical leg portion of the claim, and hence, it is in the “vicinity” of the center. In other words, the claim does not preclude other parts on the vertical leg portion that are not spaced inwardly. In claim 3, the overlap is seen. Or, the junction portion is the bottom surface of the square U shaped channel, with the vertical portion one or both of the legs of the U. That surface is “mechanically attached by way of the legs. The legs are bent downward since they are bent vertically in a downward direction since they are bent, and extend vertically in a downward direction. In claim 4, the thermistor is round. In claim 7, the portion 15 meets the claim. In claim 8, the junction portion is only near the center since it is in the periphery, and near is a term of degree. In claim 9, the upper vertical leg portion is longer. In claim 10, the bent part is the part where 13 points in Fig. 2. Claims 21-26 are similar to claims above.

7. As the 103 alternative, where the Camp vertical portion is not in the vicinity of the center, Ikeda at Fig. 7F, Frielinghaus at Fig. 4, or Duggan et al. at the sole Fig. discloses such an arrangement as typical in the arts for securing terminals to a PTC thermistors, so that such an arrangement would have been obvious, where for example, the terminals are made to accommodate larger thermistors, or are made smaller to decrease material costs.

8. Claims 1, 3-4, 7-10, and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rehnelt in view of Camp. Rehnelt discloses at Fig. 2 all of the claimed invention except explicit mention of the electrodes (claims 1, 21), and the lower end portion of claims 1, 7, 24 and 25 (termed horizontal connection portion). Camp discloses electrodes for contact purposes at

Art Unit: 2832

col. 2, lines 19-25 so that such an electrode is obvious, and discloses at col. 2, lines 20-65 horizontal connection portions 13, 15, or 23, 25 at Fig. 7, for the purpose of forming contact pads for mounting, rendering such a modification obvious. The vertical leg portions and overlapping junction portions (claims 3, 21) are at Fig. 2 of Rehnelt. The vertical leg portion at the left-hand side appears to be in the vicinity of the center since it is almost or is, entirely within the periphery of the device (claims 1, 23). As an alternative, it would have been obvious to have a vertical portion entirely inside to accommodate larger thermistors, since a larger thermistors would overlap such a portion. For claims 4 and 21, Rehnelt discloses the button shape at Fig.

3. Claims 5 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Camp (with or without the noted alternative art), or Rehnelt with Camp, further in view of Nagao et al. The claimed invention is as disclosed above except for the electrode material. Nagao discloses such a material at the abstract as conventional and for improving flash resistance, see col. 6 and table 5. It would have been obvious to employ the well known material in the manner of Nagao to improve the flash resistance.

9. Claim 6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Camp (with or without the noted alternative art), or Rehnelt with Camp, further in view of Ikeda et al. The claimed invention is as disclosed as noted above except for the terminal material. Ikeda discloses such a material at col. 10, lines 1-5 as a good elastic material for improving thermistors, such that it would have been obvious to employ the well known material in the manner of Ikeda to improve the elasticity.

10. Applicant's arguments filed 6/14/04 have been fully considered but they are moot, or not persuasive. The argument that terms of degree have been held to be definite under a 112

Art Unit: 2832

rejection is applicable only where the art is not close in terms of the term of degree. But here, this is not the case, because Duggan et al., and to a certain extent, Camp and Rehnelt create art elements that are close in terms of the elements substantially perpendicular, about 90 degrees, and in the vicinity of the center, so that Exxon above applies.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (272) 571-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (272) 571-1989. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom
Primary Examiner
Art Unit 2832

KDE